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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,202	06/01/2006	Mamoru Miyachi	107156-00333	3216
4372	7590	10/19/2007	EXAMINER	
ARENT FOX LLP			FORD, KENISHA V	
1050 CONNECTICUT AVENUE, N.W.				
SUITE 400				
WASHINGTON, DC 20036				
			ART UNIT	PAPER NUMBER
			4137	
			NOTIFICATION DATE	DELIVERY MODE
			10/19/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

Office Action Summary

Application No.

10/581,202

Applicant(s)

MIYACHI ET AL.

Examiner

Kenisha V. Ford

Art Unit

4137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/1/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishitsuka et al. (US 6,748,001 B1).

Regarding claim 1, Nishitsuka et al. teaches a method for fabricating a semiconductor laser device emitting a plurality of laser beams of different wavelengths, comprising:

- A first process of fabricating a first intermediate body on a semiconductor substrate including a step of forming a multi-layer stack having a semiconductor for forming a first lasing portion (col. 3, lines 46-58)
- A second process for fabricating a second intermediate body on a support substrate including a step of forming a layer containing a second multi-layer stack of a semiconductor for forming a second lasing portion and a step of forming a groove in the multi-layer stack (col. 3, lines 30-45).
- A third process for fabricating a bonded body by adhering the faces of the first and second intermediate bodies via an electrically conductive adherent layer (col. 3, line 64-col. 4, line 5).

- A fourth process for irradiating the second multi-layer stack with light through the support substrate of the bonded body to separate the support substrate from the second multi-layer stack (col. 8, lines 12-26).

Regarding claim 2, Nishitsuka et al. teaches a method for fabricating a semiconductor laser device wherein light passes through the support substrate and is absorbed by the second multi-layer stack in the vicinity of an interface with the support substrate (col. 8, lines 12-26).

Regarding claim 3, Nishitsuka et al. teaches a method for fabricating a semiconductor laser device emitting a plurality of laser beams of different wavelengths, comprising:

- A first process of fabricating a first intermediate body on a semiconductor substrate including a step of forming a multi-layer stack having a semiconductor for forming a first lasing portion (col. 3, lines 46-58)
- A second process for fabricating a second intermediate body on a support substrate including a step of forming a layer containing at least a light absorption layer, a step of forming a second multi-layer stack of a semiconductor for forming a second lasing portion on the light absorption layer and a step of forming a groove in the multi-layer stack (col. 3, lines 30-45; col. 8, 20-26).
- A third process for fabricating a bonded body by adhering the faces of the first and second intermediate bodies via an electrically conductive adherent layer (col. 3, line 64-col. 4, line 5).
- A fourth process for decomposing the light absorption layer by irradiating the light absorption layer with light through the support substrate of the bonded body to strip of the support substrate along the decomposed light absorption layer (col. 8, lines 12-26)

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Regarding claim 4, Nishitsuka et al. teaches a method for fabricating a semiconductor laser device wherein in the second process the groove is formed deeper than a depth from a surface of the second multi-layer stack to the light absorption layer (col. 3, lines 35-39).

Regarding claim 5, Nishitsuka et al. teaches a method for fabricating a semiconductor laser device wherein the light passes through the support substrate and is absorbed by the light absorption layer (col. 8, lines 12-26).

Regarding claim 6, Nishitsuka et al. teaches a method for fabricating a semiconductor laser device wherein at least one of the first or second processes includes forming an adherent layer on at least one of the faces of the first or second intermediate bodies on the sides of the multi-layer stacks (col. 3, line 64-col. 4, line 5).

Regarding claim 8, Nishitsuka et al. discloses a method wherein the adherent layer is a metal (col. 3, line 64-col. 4, line 5).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishitsuka et al. (US 6,748,001 B1) in view of Miyachi et al. (US 2002/0142503 A1).

Nishitsuka et al. teaches a method for fabricating a semiconductor laser device emitting a plurality of laser beams of different wavelengths, comprising:

- A first process of fabricating a first intermediate body on a semiconductor substrate including a step of forming a multi-layer stack having a semiconductor for forming a first lasing portion (col. 3, lines 46-58)
- A second process for fabricating a second intermediate body on a support substrate including a step of forming a layer containing a second multi-layer stack of a semiconductor for forming a second lasing portion and a step of forming a groove in the multi-layer stack (col. 3, lines 30-45).
- A third process for fabricating a bonded body by adhering the faces of the first and second intermediate bodies via an electrically conductive adherent layer (col. 3, line 64-col. 4, line 5).
- A fourth process for irradiating the second multi-layer stack with light through the support substrate of the bonded body to separate the support substrate from the second multi-layer stack (col. 8, lines 12-26).

Nishitsuka et al. does not teach the materials that the first and second multi-layer stacks are made of.

However, Miyachi et al. discloses a method for fabricating a semiconductor laser device wherein:

- The first multi-layer stack has a III-V compound semiconductor containing any one of arsenic, phosphorus and antimony as a group V element or a II-VI compound semiconductor (p. 3, para. 40, lines 1-6)
- The second multi-layer stack has a nitride-based III-V compound semiconductor with the group V element being nitrogen (p.1, para. 21).

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Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Miyachi et al. in the device of Nishitsuka et al. to obtain a method for transferring the multi-layer stack/body onto a substrate that is highly cleavable (p.1, para. 7).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenisha V. Ford whose telephone number is (571) 270-3328. The examiner can normally be reached on Monday-Thursday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm Ullah can be reached on (571) 272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KVF


AKM ULLAH
SUPERVISORY PATENT EXAMINER